

**Notice of Allowability**

Application No.

10/057,879

Examiner

Jason M. Perilla

Applicant(s)

KURABE ET AL.

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed September 28, 2005.
2. ☒ The allowed claim(s) is/are 1.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20051121.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20051221.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael E. Fogarty on November 21, 2005.

The application has been amended as follows:

Regarding claim 1, in line 3, "(symbol "k" being integer larger than, or equal to 0)" is replaced by --wherein "k" is an integer larger than, or equal to 0--.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Text labels are added in figures 3, 7, 9 and 10 according to the attached marked up drawing sheets.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmp



KENNETH VANDERPUYE  
SUPERVISORY PATENT EXAMINER



Jason M. Perilla  
November 21, 2005

FIG. 1

$$H_3 = \begin{bmatrix} H_2 & H_2 \\ H_2 & \overline{H_2} \end{bmatrix}$$

COLUMN NUMBER								ROW NUMBER
000	001	010	011	100	101	110	111	
0	0	0	0	0	0	0	0	000
0	1	0	1	0	1	0	1	001
0	0	1	1	0	0	1	1	010
0	1	1	0	0	1	1	0	011
0	0	0	0	1	1	1	1	100
0	1	0	1	1	0	1	0	101
0	0	1	1	1	1	0	0	110
0	1	1	0	1	0	0	1	111

FIG. 2 (a)

ROW "001"      COLUMN "000"      VALUE OF ROW NUMBER "001"  
CORRESPONDING TO COLUMN NUMBER "000"

$$\begin{aligned}
 & \downarrow \qquad \qquad \downarrow \\
 & 1 \text{ (0TH BIT VALUE)} \times 0 \text{ (0TH BIT VALUE)} + \\
 & 0 \text{ (1ST BIT VALUE)} \times 0 \text{ (1ST BIT VALUE)} + \\
 & 0 \text{ (2ND BIT VALUE)} \times 0 \text{ (2ND BIT VALUE)} = \underline{\underline{0}}
 \end{aligned}$$

FIG. 2 (b)

ROW "001"      COLUMN "001"      VALUE OF ROW NUMBER "001"  
CORRESPONDING TO COLUMN NUMBER "001"

$$\begin{aligned}
 & \downarrow \qquad \qquad \downarrow \\
 & 1 \text{ (0TH BIT VALUE)} \times 1 \text{ (0TH BIT VALUE)} + \\
 & 0 \text{ (1ST BIT VALUE)} \times 0 \text{ (1ST BIT VALUE)} + \\
 & 0 \text{ (2ND BIT VALUE)} \times 0 \text{ (2ND BIT VALUE)} = \underline{\underline{1}}
 \end{aligned}$$

FIG. 2 (c)

ROW "abc"      COLUMN "def"      VALUE OF ROW NUMBER "abc"  
CORRESPONDING TO COLUMN NUMBER "def"

$$\begin{aligned}
 & \downarrow \qquad \qquad \downarrow \\
 & c \text{ (0TH BIT VALUE)} \times f \text{ (0TH BIT VALUE)} + \\
 & b \text{ (1ST BIT VALUE)} \times e \text{ (1ST BIT VALUE)} + \\
 & a \text{ (2ND BIT VALUE)} \times d \text{ (2ND BIT VALUE)} = \underline{\underline{X}}
 \end{aligned}$$

FIG. 3

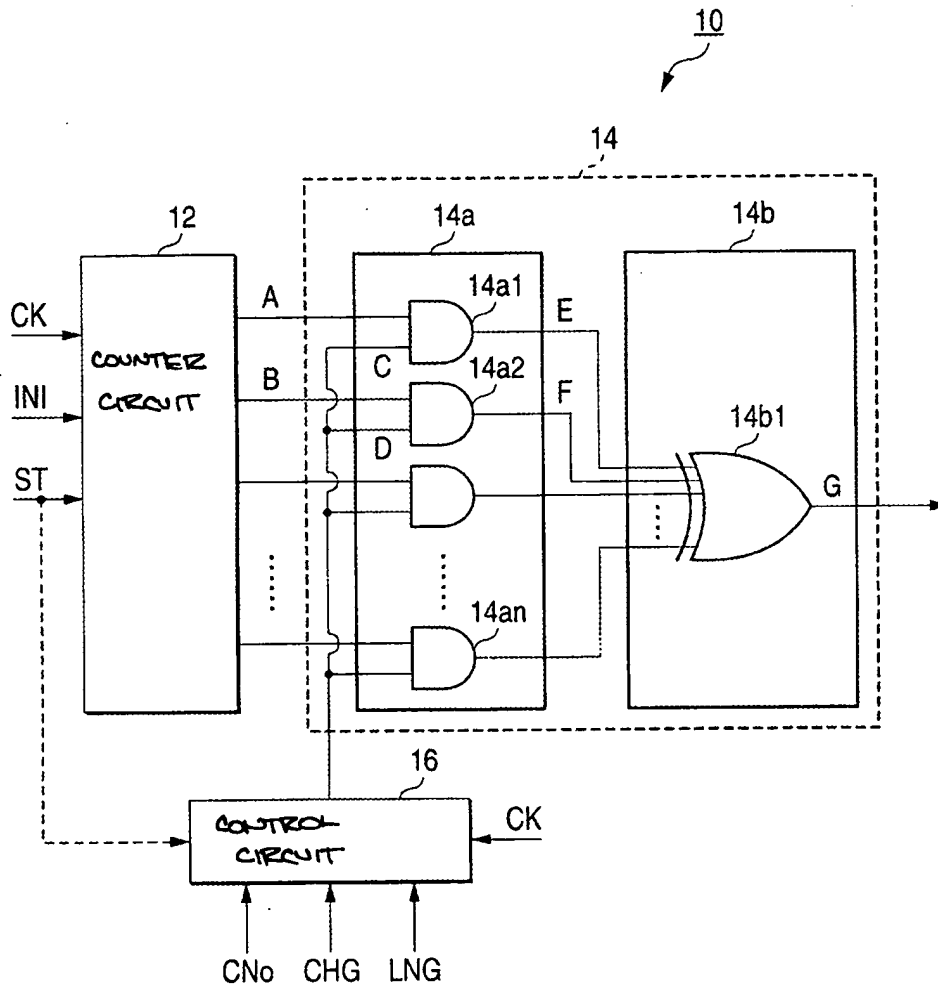


FIG. 4 (a)

	COLUMN NUMBER				ROW NUMBER OF HIERARCHICAL ORTHOGONAL CODE		ROW NUMBER OF HADAMARD MATRIX
	00	01	10	11			
C2 (0)	0	0	0	0	00	←	00
C2 (1)	0	0	1	1	01	←	10
C2 (2)	0	1	0	1	10	←	01
C2 (3)	0	1	1	0	11	←	11

FIG. 4 (b)

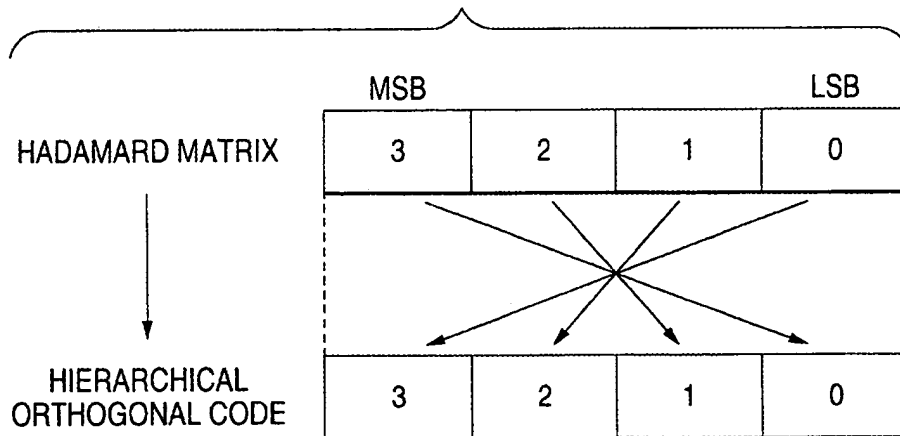


FIG. 5

								ROW NUMBER (CODE NUMBER)
H <sub>3</sub> =	0	0	0	0	0	0	0	000
	0	1	0	1	0	1	0	001
	0	0	1	1	0	0	1	010
	0	1	1	0	0	1	1	011
	0	0	0	0	1	1	1	100
	0	1	0	1	1	0	1	101
	0	0	1	1	1	1	0	110
	0	1	1	0	1	0	0	111

FIG. 6

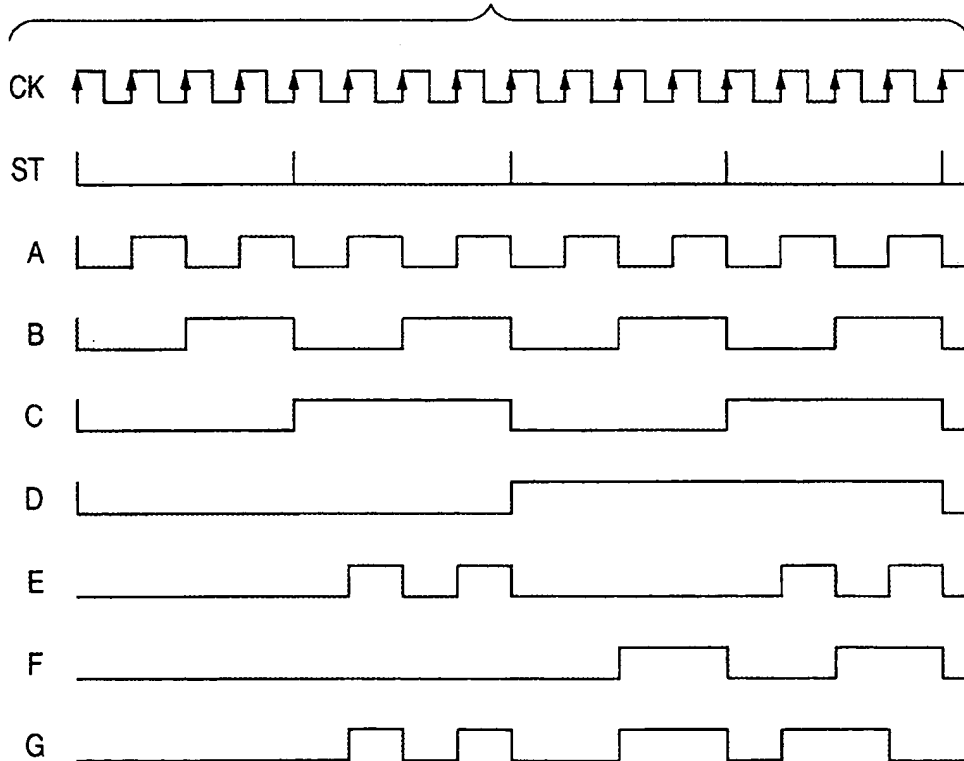




FIG. 7

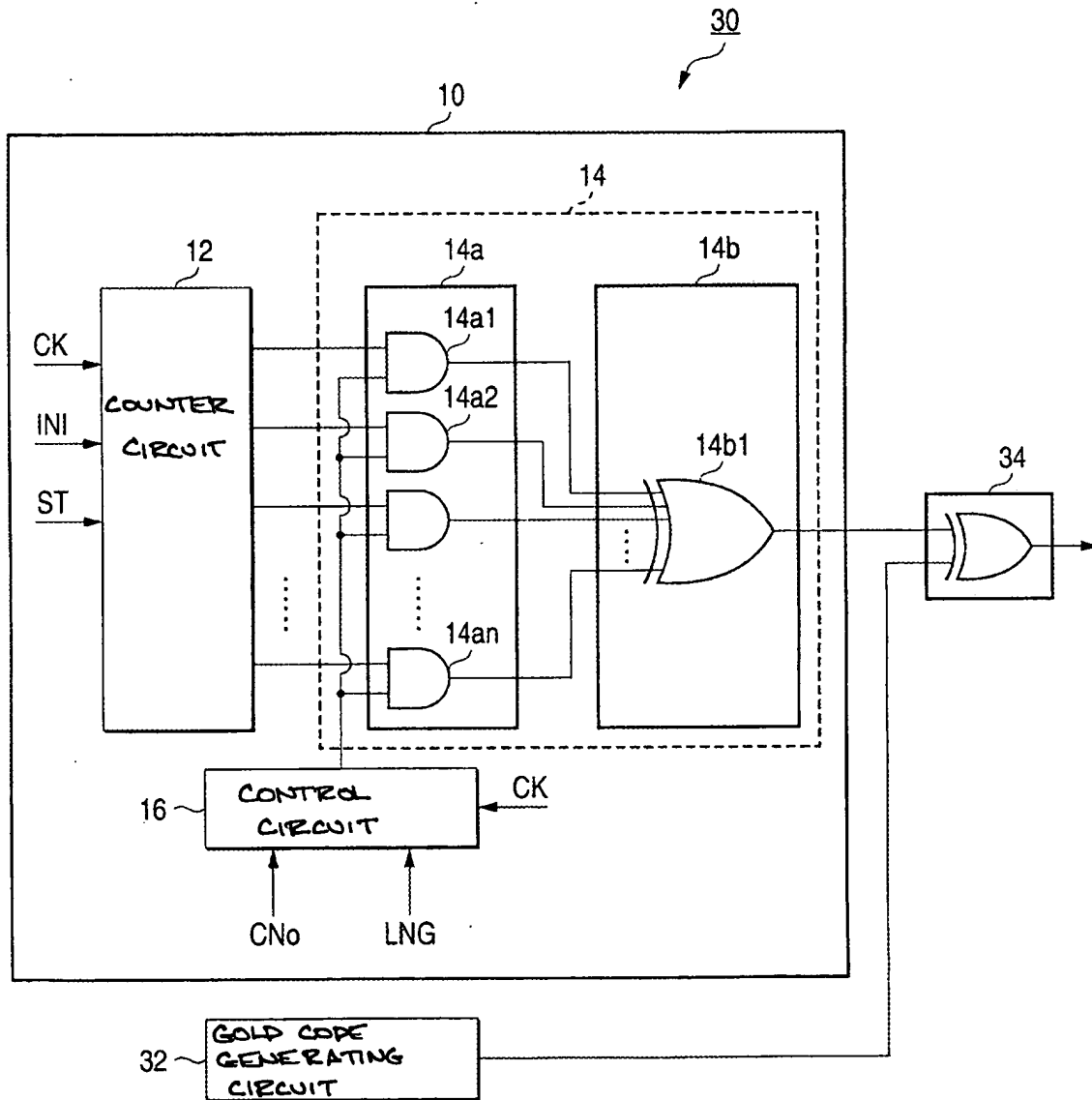
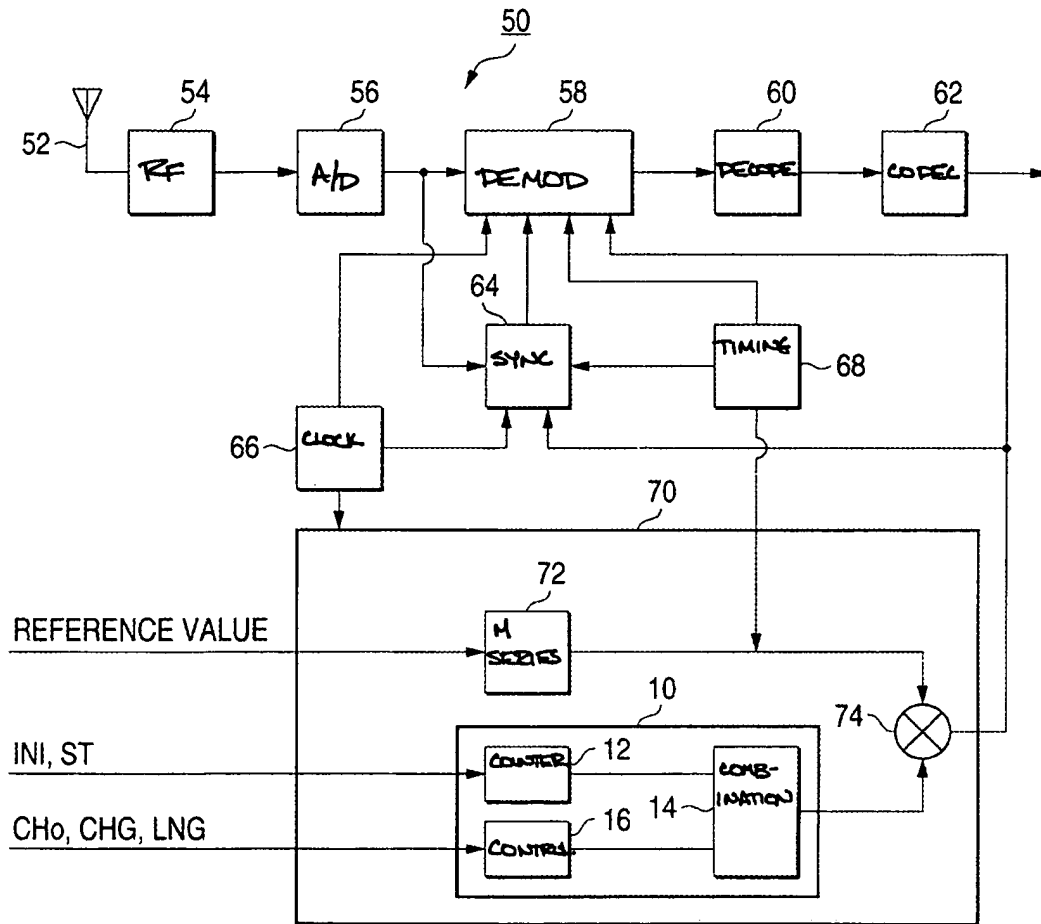


FIG. 8

								CODE NUMBER (ROW NUMBER)
$C_3 =$	0	0	0	0	0	0	0	000
	0	0	0	0	1	1	1	001
	0	0	1	1	0	0	1	010
	0	0	1	1	1	1	0	011
	0	1	0	1	0	1	0	100
	0	1	0	1	1	0	1	101
	0	1	1	0	0	1	1	110
	0	1	1	0	1	0	0	111

FIG. 9

FIG. 10  
PRIOR ART  
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